## AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## LISTING OF CLAIMS:

1. (original) A balloon-deployable stent comprising:

an armature made in a first material allowing an expansion over time of said armature;

a matrix made in a second material, said matrix being added on said armature;

wherein said second material gradually mechanical properties thereof by creeping, after the stent is deployed under a deployment of a balloon introduced into said armature, thereby allowing controlled radial expansion of said armature period of time.

- 2. (original) The stent of claim 1, wherein said second material loses the mechanical properties thereof at a temperature encountered in a human body.
- 3. (currently amended) The stent of any one of claims 1 and 2 claim 2, wherein said second material comprises includes at least in part polymeric materials, second said material having an initial sufficient to maintain the stent in a contracted position on the balloon during storage, a low yield strain from an elastic to a plastic regime, a sufficiently high total elongation, and creeping properties at human temperature.

- 4. (original) The stent of claim 3, wherein the initial rigidity of said second material is at least 1000 MPa, the yield strain thereof is less than about 8%, the total elongation thereof is greater than about 100 %, and the creeping properties thereof allow a loss of at least 50% of the Initial rigidity thereof within 1000 hours.
- 5. (currently amended) The stent according to any one of claims 1 to 4 claim 1, wherein said matrix comprises a number of rings.
- 6. (original) The stent according to claim 5, wherein said rings are selected in the group consisting of rings braided around said armature and rings secured in slots provided on said armature.
- 7. (currently amended) The stent according to any one of claims 1 to 4 claim 1, wherein said matrix is matrix includes a coating deposited on said armature.
- 8. (currently amended) The stent of any one of claims 1 to 7 according to claim 1, wherein said first material is a shape memory alloy.
- 9. (original) The stent of claim 8, wherein said shape memory alloy is nitinol.
- 10. (currently amended) The stent of any one of claims 1 to 9-according to claim 1, wherein said second material is selected in the group consisting of polycarbonate and polyethylene.
  - 11. (currently amended) The stent of any one of

claims 1 to 10 according to claim 1, wherein said stent, including said matrix, mounted on the balloon, is introduced into a retention sheath preventing a creep of said matrix during storage of the stent, thereby preventing a deployment of the armature.

- 12. (currently amended) A method for expanding a lumen, comprising:
- a) introducing introducing in the lumen a stent comprising an armature made in a first material allowing self-deployment of the armature, and a matrix made in a second material having creep properties that make it gradually lose mechanical properties thereof;
- b) deploying deploying the armature using a balloon positioned in the armature, the balloon ensuring [[an]]a substantially irreversible deformation of the matrix during inflation of the balloon and allowing a self-deployment of the armature; and
  - c) removing removing the balloon from the lumen;

whereby the creep properties of the second material allow the progressive self-deployment of the armature and a positioning of the armature at a predetermined position in the lumen with minimised damage on walls of the lumen.

- 13. (currently amended) The method of claim 12, wherein the second material comprises includes at least in part polymeric materials and has an initial rigidity sufficient to maintain the stent in a contracted position on the balloon during storage, a low yield strain from an elastic to a plastic regime, a sufficiently high total elongation, and creep properties temperatures encountered in a human body.
  - 14. (original) The method of claim 13, wherein the

initial rigidity of the second material is at least 1000 MPa, the yield strain thereof is less than about 8%, the total elongation thereof is at least about 100 % and the creep properties thereof allow a loss of at least 50% of the initial rigidity within 1000 hours.

- 15. (currently amended) The method of any one of claims 12 to 14 of claim 12, wherein the armature comprises includes a shape memory alloy.
- 16. (original) The method of claim 15, wherein the shape memory alloy is nitinol.
- 17. (currently amended) The method of any one of claims 12 to 16 of claim 12, wherein the second material comprises includes a polymer selected in the group consisting of polycarbonate and polyethylene.
- 18. (currently amended) The method of any one of claims 12 to 17 of claim 12, further comprising before step a) removing the stent from a retention sheath covering the matrix and the armature before introducing the stent in the lumen.